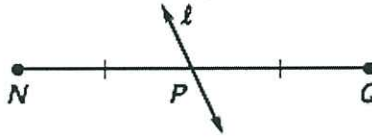


Name: _____ TP: _____

Failure to show work on all problems or use complete sentences will result in a LaSalle.

Use the diagram below for problems 1 – 4.



1. What is the name of the line that bisects segment NQ ?

2. What is the name of the midpoint of NQ ?

3. Find NP if $NQ = 31.8$ cm.

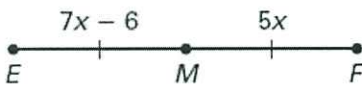
NP is half of NQ

4. Find NQ if $PQ = 13$ in.

5. Find MF .

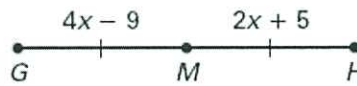
Last week $\rightarrow EM + MF = EF$

$EM = MF$



6. Find MH .

$GM = MH$



7. Line AB is bisected at point C . Find AC if $AB = 56$ feet.

DRAW PICTURE

8. ~~Line AB is bisected at point C . Find BC if $AC = 12$ cm.~~

DO NOT DO THIS PROBLEM

9. Your house and the mall are 9.6 miles apart on the same straight road. The movie theater is halfway between your house and the mall, on the same road.

a. Draw and label a sketch to represent this situation.

b. How far is your house from the movie theater?

10. Which point represents the midpoint of segment AB ?



- A. Point D
 C. Point C

- B. Point D and Point C
 D. Point E

11. Find the midpoint of a segment on a number line with coordinates -12 and 32 .

DRAW PICTURE

- A. -44
 B. 10
 C. 20
 D. 22



PUSH IT TO THE LIMIT.

12. A line passes through point A(9,4) and point B(17, 6). What is the slope?

$$\frac{(y_2)-(y_1)}{(x_2)-(x_1)} = m$$

13. Without calculating the slope, how can you tell that the slope of the line that passes through the points (-5, -3) and (2, 4) is positive?

14. Challenge. You must **attempt** to solve for x!

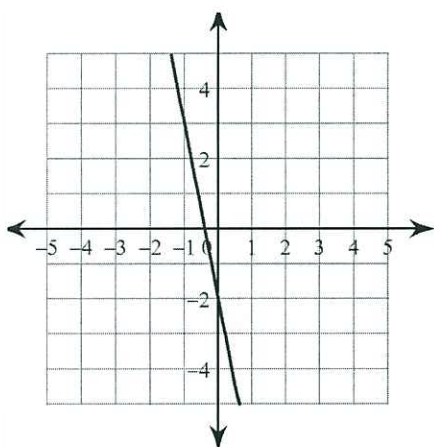
(4, y) and (7, -6); slope: -4

x_1 y_1 x_2 y_2 m

$$\frac{(-6)-(y)}{(7)-(4)} = -4$$

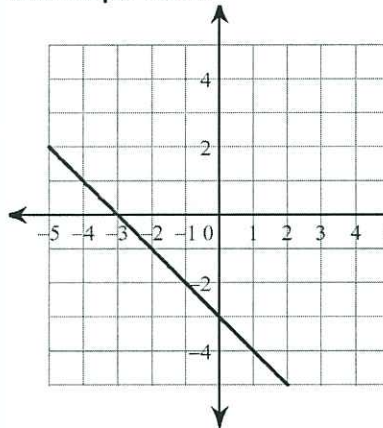
15. If S(-2, 1), T(-12, 11), and U(-6, -1), which line has the smallest (*hint: flattest*) slope: TU, ST, or SU? Explain how you know.

16. Write the equation of this graph in slope-intercept form.



Y-Int: ____ / Slope: ____ / Equation: _____

17. Write the equation of this graph in slope-intercept form.



1) Find slope

2) Find y-intercept

3) Put it together in slope-intercept form $y=mx+b$

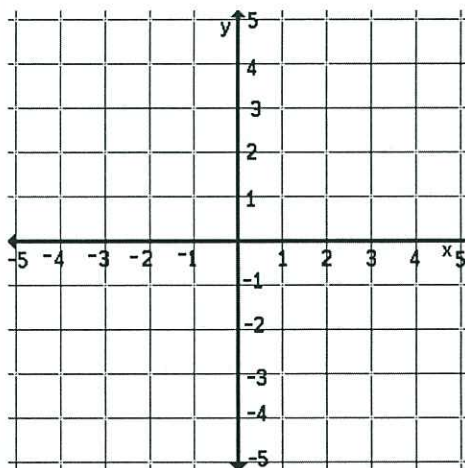
Y-Int: ____ / Slope: ____ / Equation: _____

18. **ERROR ANALYSIS!!!** (Write in complete sentences)

Describe and correct the error in calculating the slope of the line passing through the points (5, 3) and (2, 6).

$$m = \frac{6-3}{5-2} = \frac{3}{3} = 1$$

19. Graph the equation of the line that intersects the coordinate (-3, -1) and has a slope of $\frac{1}{4}$.



PUSH IT TO THE LIMIT.

Name: _____ TP: _____

Failure to show work on all problems or use complete sentences will result in a LaSalle.

1. Find the coordinates of the midpoint of the segment with the given endpoints.

a. R(3, 1) and S(3, 7) $M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

$$\left(\frac{3+3}{2}, \frac{1+7}{2} \right) =$$

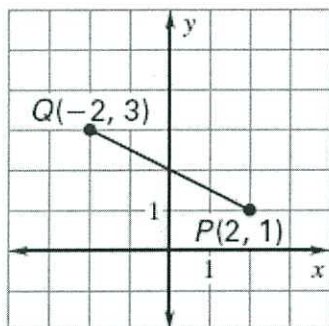
b. V(2, 4) and W(6, 6)

2. Use the given endpoint Y and midpoint M to find the coordinates of the other endpoint Z.

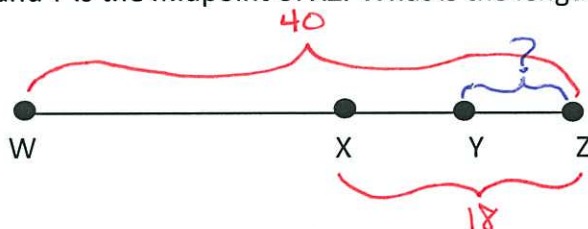
a. Y(0, 5), M(3, 3)

b. Y(-1, -3), M(5, 9)

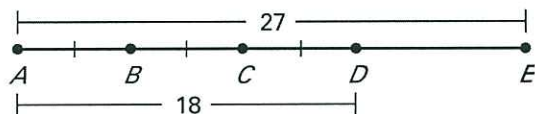
3. Find the midpoint of the segment QP.



4. Points W, X, Y, and Z are collinear. WZ = 40, XZ = 18, and Y is the midpoint of XZ. What is the length of XY?



5. Find the indicated length.



a. DE

b. AB

~~c. AC~~

d. BD

e. CE

~~f. BE~~

6. On a number line, point Q is located at 10, point R is located at -5, and point S is located at -13.

a. Draw a number line.

b. Find the length of QS.

c. Find the length of RS.

d. How much longer is Segment QS than RS?

7. Given the two points $(-2, -1)$ and $(4, 5)$, calculate the slope of the line.

$$\frac{(y_2) - (y_1)}{(x_2) - (x_1)} = m$$

8. Find the slope from these two points:

$(5, 20), (-14, 18)$

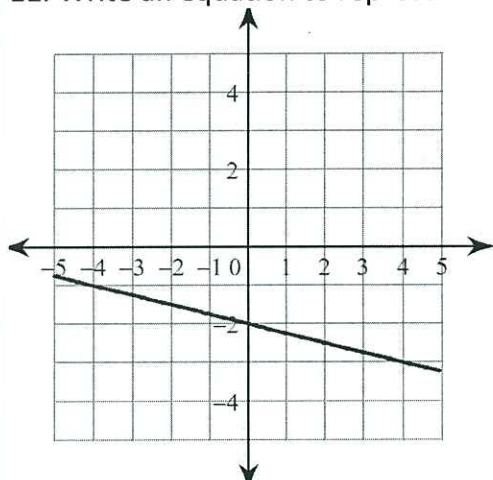
9. What is the slope of \overleftrightarrow{AB} if $A(0, -2)$ and $B(2, -2)$?

10. What is the slope of \overleftrightarrow{CD} if $C(5, -4)$ and $D(5, 2)$?

Is this a line or a line segment? _____

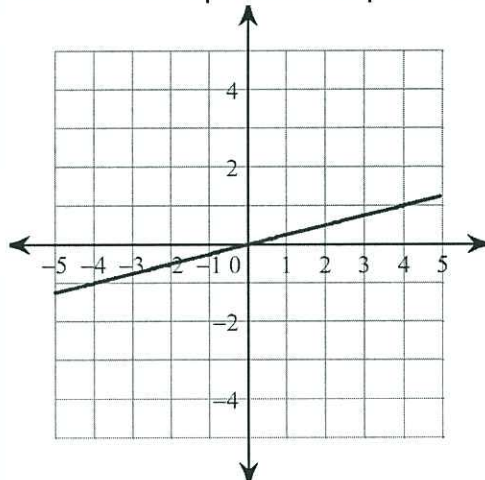
Is this a line or a line segment? _____

11. Write an equation to represent the graph below.



Y-Int: ____ / Slope: ____ / Equation: _____

12. Write an equation to represent the graph below.



Y-Int: ____ / Slope: ____ / Equation: _____

13. Challenge. **You must ATTEMPT or you will you receive LaSalle.** What is the value of x ?

$(x, 1)$ and $(-5, -6)$; slope: $\frac{7}{6}$

$$\frac{(-6) - (1)}{(-5) - (x)} = \frac{7}{6}$$

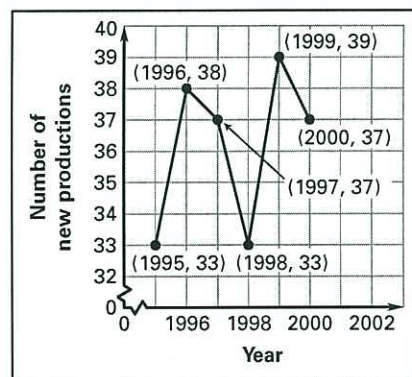
14. Challenge. **You must ATTEMPT or you will you receive LaSalle.**

The graph shows the number of new Broadway show productions for certain years. Find the rate of change between:

a. 1995 to 1996

b. 1998 to 1999

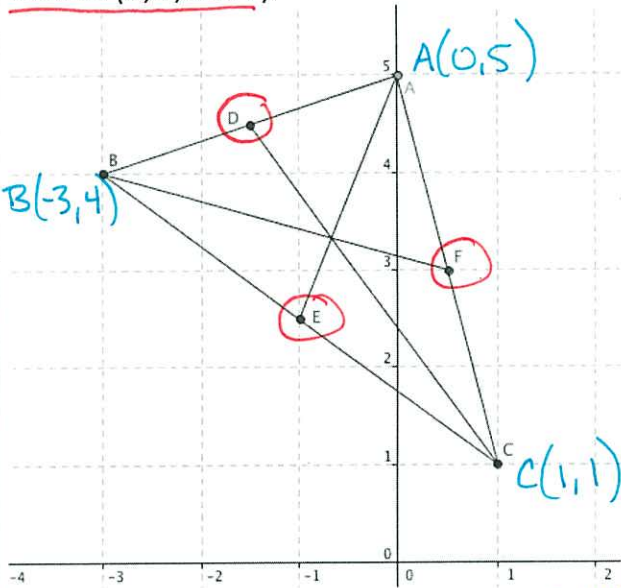
c. Which year had the greatest rate of change? How do you know?



Name: _____ TP: _____

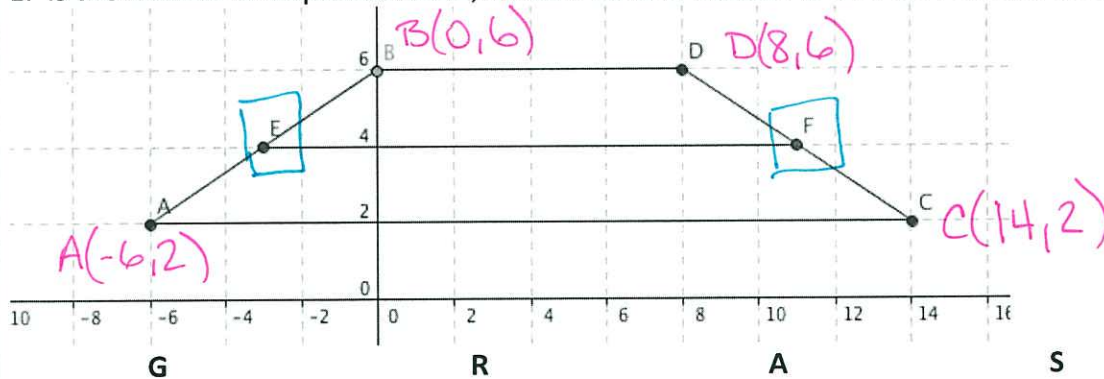
Failure to show work on all problems or use complete sentences will result in a LaSalle.

1) A median of a triangle is a line segment from one vertex to the midpoint of the opposite side. For example, A is a vertex and AE is the line segment that bisects BC. Find the coordinate of each midpoint created by each median (D, E, and F).



USE MIDPOINT FORMULA!!!

2) ABCD is an isosceles trapezoid. This means that BD is parallel o AC, and AB is congruent to CD. Line segment EF is the median of trapezoid ABCD, which means it bisects AB and CD. Find the coordinates of E and F.



PUSH IT TO THE LIMIT.

a) A line passes through the points $(-3, 4)$ and $(4, 1)$.
What is the slope of this line?

Sketch the line:

a) Find the slope between $(8, 10)$ and $(8, -2)$.

b) Sketch the line:

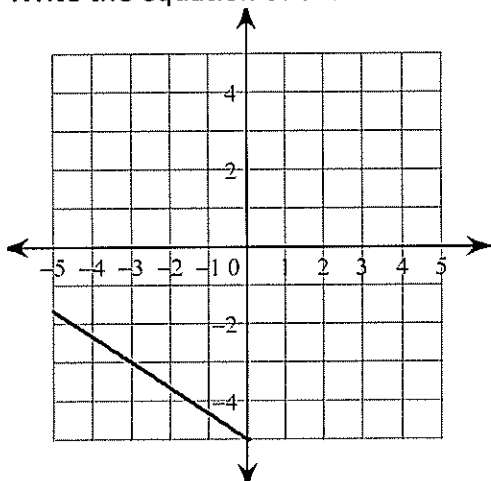
c) What do we call this kind of line?

Determine the rate of change in the table below: *↳ slope*

x	y
5	2
10	3
15	4
20	5

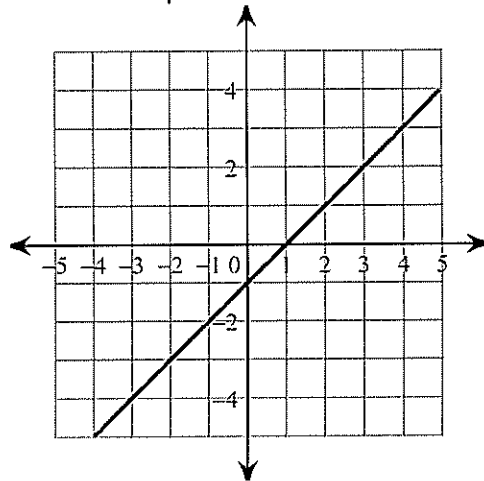
If $G(-2, 0)$, $H(-3, 8)$, and $L(-16, -4)$, which line has the biggest slope: GH , GL , or HL ? *Explain how you know.*

Write the equation of the line below:



Y-Int: ____ / Slope: ____ / Equation: ____

Write the equation of the line below:



Y-Int: ____ / Slope: ____ / Equation: ____

Challenge. You must ATTEMPT or you will you receive LaSalle.

$(8, -1)$ and $(x, 8)$; slope: $-\frac{9}{5}$

Challenge. You must ATTEMPT or you will you receive

LaSalle. The table shows the amount of money (in dollars) spent by a household on plants and flowers for certain years. Find the rate of change between:

Year	2001	2002	2003	2004	2005
Amount spent (dollars)	127	134	139	137	136

a. 2001 to 2002

b. 2003 to 2004

PUSH IT TO THE LIMIT.